



**S1820
CONVEYOR OVEN
REPLACEMENT PARTS MANUAL
(with WIRING DIAGRAMS)**



EFFECTIVE with SERIAL #351410405 and AFTER

Serial # Code
First 4 digits - order of production
Fifth digit - model specific
Sixth and Seventh digit - month of production
Eighth and Ninth digit - year of production

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BLODGETT CONVEYOR OVEN, 1400 Toastmaster Drive, Elgin, IL 60120
Telephone: 847-741-3300 • Fax Number 847-741-4406

www.blodgett.com

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S1820

MODEL S1820 Electric Conveyor Oven



Project _____
Item No. _____
Quantity _____

Blodgett conveyor oven with 18" (457mm) wide belt and 20" (508mm) baking zone length. Single, double or triple stack models are available.

EXTERIOR CONSTRUCTION

- Stainless steel front, top and sides

INTERIOR CONSTRUCTION

- Stainless steel air flow plate on top and bottom
- 18" (457mm) stainless steel wire mesh conveyor belt
- Two single inlet blowers behind the heat source for air circulation, supplying top and bottom air flow

OPERATION

- Heat transferred through forced directed hot air impingement
- Open vented baking compartment
- Watlow Firebar® resistance heating element
- Solid state digital controls to display set point and actual temperature as well as belt speed
- Two blower motors with thermal overload protectors
- One blower area cooling fan
- 1-10 minute bake time

STANDARD FEATURES

- Solid state controls
- 4" (102mm) legs
- One 6" (152mm) and one 12" (305mm) extension tray
- Field reversible belt direction
- Removable belt assembly
- NEMA #650 Cord for 208V and 240V (cord for 380V and 480V not provided)
- One year parts & labor warranty*

OPTIONS AND ACCESSORIES

(AT ADDITIONAL CHARGE)

Stands

- Stand w/casters for single or double stack
- Stand w/casters for triple stack
- One year additional extended warranty*



* For all international markets, contact your local distributor.

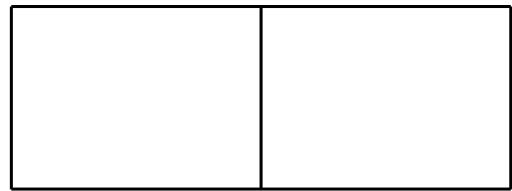
BLODGETT CONVEYOR OVEN

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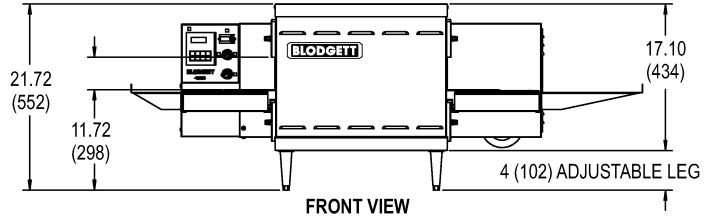
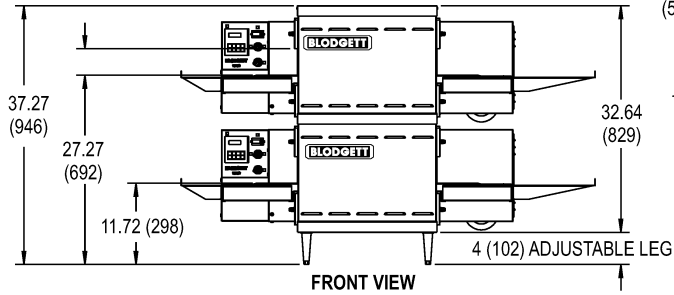


MODEL S1820

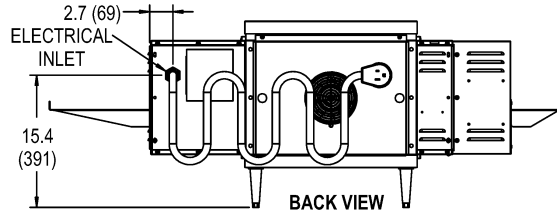


APPROVAL/STAMP

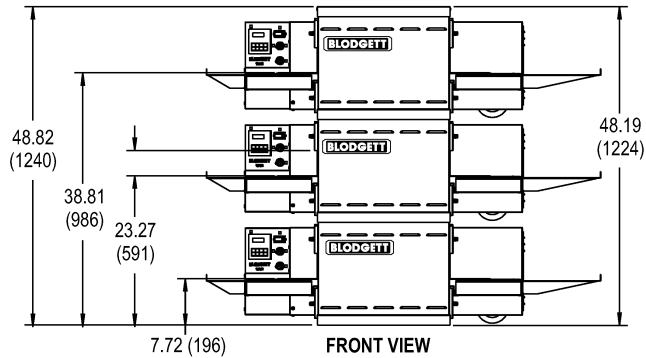
DIMENSIONS ARE IN INCHES (MM)



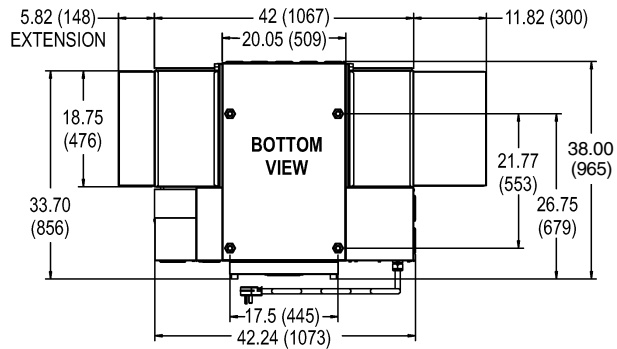
FRONT VIEW



BACK VIEW



FRONT VIEW



BOTTOM VIEW

SHORT FORM SPECIFICATIONS

Provide Blodgett model S1820 conveyor oven. Unit shall be electrically heated and shall cook by means of forced, heated air. Unit shall be (single/double/triple) deck supported by (specify stand type from options list). Each deck shall be fully independent, of stainless steel construction, and fully insulated on all sides. Provide with electrically heated baking compartment with two blowers to evenly distribute heat across baking zone. Conveyor belt shall be 18" (457mm) wide and constructed of stainless steel wire mesh; baking zone length shall be 20" (510mm). Side mounted control panel shall be solid state with 550°F (288°C) maximum thermostat and digital display of adjustable belt speed. Provide options and accessories as indicated.

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NOTE: FOR COMMERCIAL USE ONLY

Printed in U.S.A.

P/N M10989 Rev C (8/05)

S1820 OVEN SPECIFICATIONS

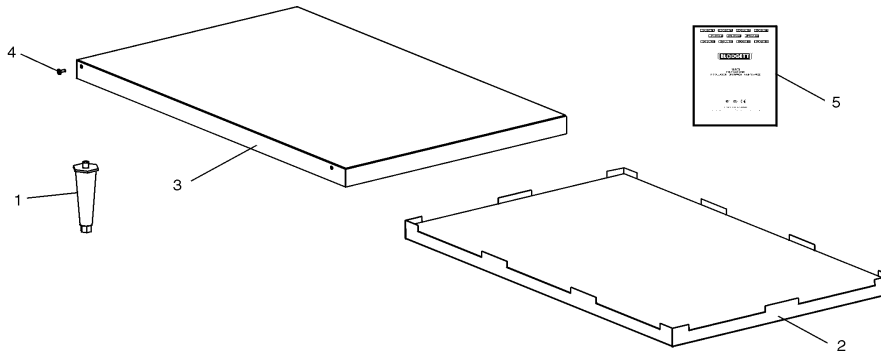
Conveyor Belt Width	18.00" (457mm)
Heating Zone Length	20.00" (5098mm)
Baking Area Square Feet	2.5 sq. ft. (0.23 sq. m.)
Overall Dimension Standard Single Oven w/Legs	42.00" (1067mm) L x 38.00" (965mm) W x 21.72" (786mm) H x
Overall Dimension Double Oven	42.00" (1067mm) L x 38.00" (965mm) W x 37.27" (947mm) H x
Overall Dimension Triple Oven	42.00" (1067mm) L x 38.00" (965mm) W x 52.82" (1342mm) H x
Weight of Single Oven	250 lb (93.3kg)
Shipping Weight	325 lb (121.3kg)
Shipping Cube	22.1 ft ³ (0.62 m ³)
Operating Range	8.3 kW/hr
Maximum Operating Temperature	550°F (287°C)
Warm-up Time	20 min.
Bake Time Range	1-10 minutes

S1820 ELECTRICAL SPECIFICATIONS

Main Blower & Elements Voltage	Control Circuit Voltage	Phase	Frequency	Amperage Draw	Poles	Wires
208-240V	208-240V	1 Ph	50/60 Hz	39.9 Amp	2 Pole	3 Wire (2 hot, 1 grd)
HEATER AMPERAGE						
Voltage kW Amp						
208 8.3 39.9						
230 7.6 33.0						
240 8.3 34.6						
380V Export	208-240V	1 Ph	50/60 Hz	21.8 Amp	3 Pole	4 Wire (2 hot, 1neut, 1 grd)
HEATER AMPERAGE						
Voltage kW Amp						
380 8.3 21.8						
400 9.2 23.0						
480V	208-240V	1 Ph	50/60 Hz	17.3 Amp	3 Pole	4 Wire (2 hot, 1neut, 1 grd)
HEATER AMPERAGE						
Voltage kW Amp						
480 8.3 17.3						

**PARTS LIST FOR 1820S ELECTRIC OVEN
INSTALLATION KIT
Single and Double Stack Ovens
P/N 54659**

ITEM NO.	QTY	PART NO.	DESCRIPTION
1	4	3101908	LEG 4" AD FT
2	1	48395	BOTTOM TRAY w/INSULATION
3	1	48396	TOP COVER
4	4	51387	SCREW MSSLT THREAD 8-32 x 1/2, 18-8
5	1	55310	OWNER'S OPERATING & INSTALLATION MANUAL



**PARTS LIST FOR S1820 ELECTRIC OVEN
INSTALLATION KIT
Triple Stack Oven
P/N 54660**

ITEM NO.	QTY	PART NO.	DESCRIPTION
1	1	48395	BOTTOM TRAY w/INSULATION
2	1	48396	TOP COVER
3	4	51387	SCREW MSSLT THREAD 8-32 x 1/2, 18-8
4	4	M3828	PIN, ALIGNMENT
5	1	55310	OWNER'S OPERATING & INSTALLATION MANUAL

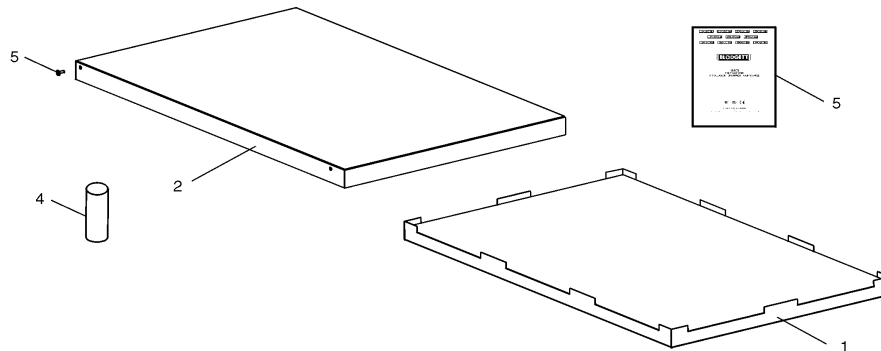


Figure 1. S1820 Electric Oven Installation Parts

KEY SPARE PARTS KIT

An oven can be purchased with a Key Spare Parts Kit (Figure 2). (The kit can be purchased when the oven is ordered, or later, from a Blodgett Authorized Parts Distributor). The kit contains many of the crucial parts that

can reduce serious downtime and loss of production, if a failure occurs.

Replacement parts for this kit can be purchased from your Blodgett Authorized Parts Distributor.

S1820 ELECTRIC OVEN KEY SPARE PARTS KIT (Figure 2)

ITEM	PART NO.	ENGLISH DESCRIPTION	QUANTITY
1	47321	Kit, Temperature Control On/Off Pid	1
2	48636	Relay, 100A	1
3	58390	Conveyor Drive Motor Kit	1
4	37337	Conveyor Speed Control	1
5	33812-5	Thermocouple(s)* (3 used)	1
6	50715	Heater Element, 208V	1
6	51017	Heater Element, 240V	1
6	51958	Heater Element, 380V	1
6	51961	Heater Element, 480V	1
7	57408	Contactors	1
8	50610	Air Switch	1

* The proper location for the thermocouple is as follows: 1) A temperature sensing thermocouple is located on the entrance end and exit end of the unit on the bottom, 2) High limit is located on the exit end of the unit on the top as standard (on a left to right direction), 3) High limit on the S1820 is 550 degree's.

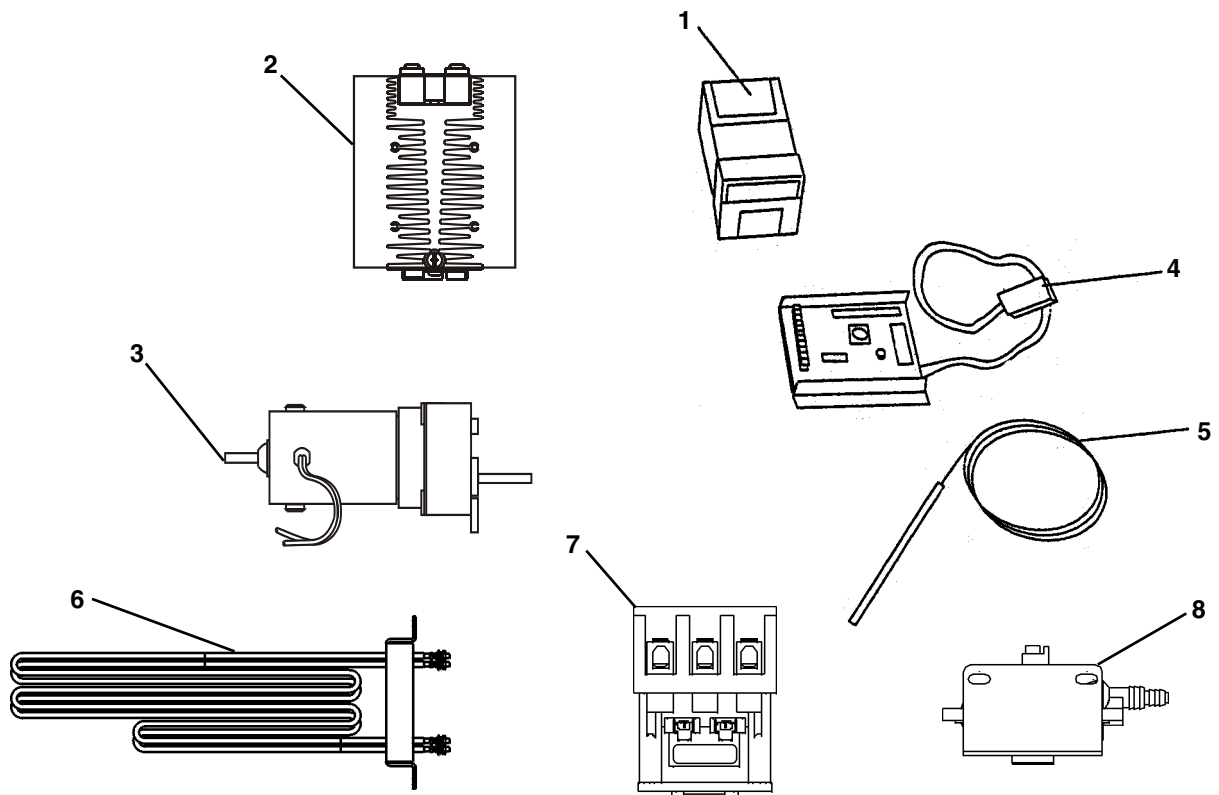
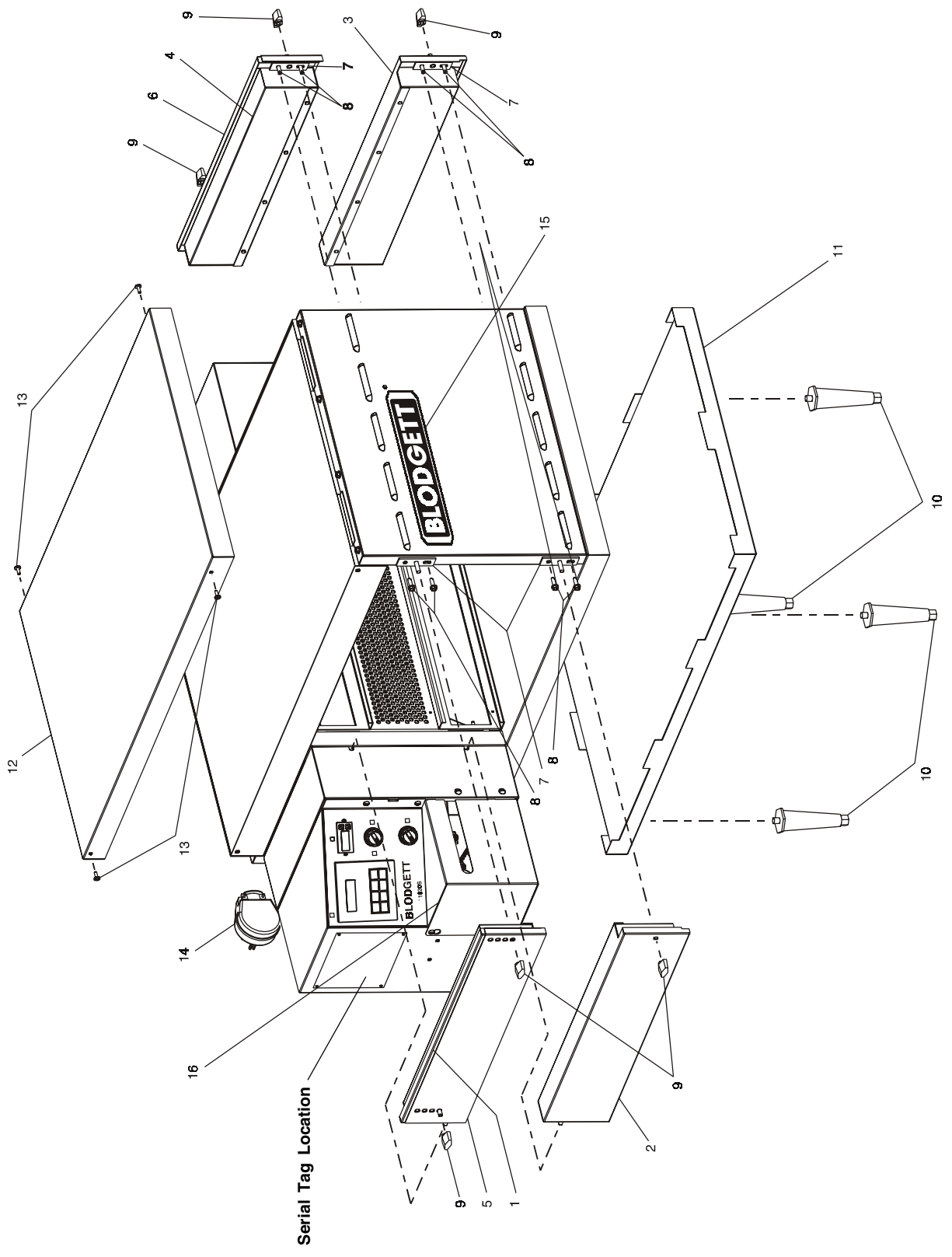


Figure 2.

Front View of Oven

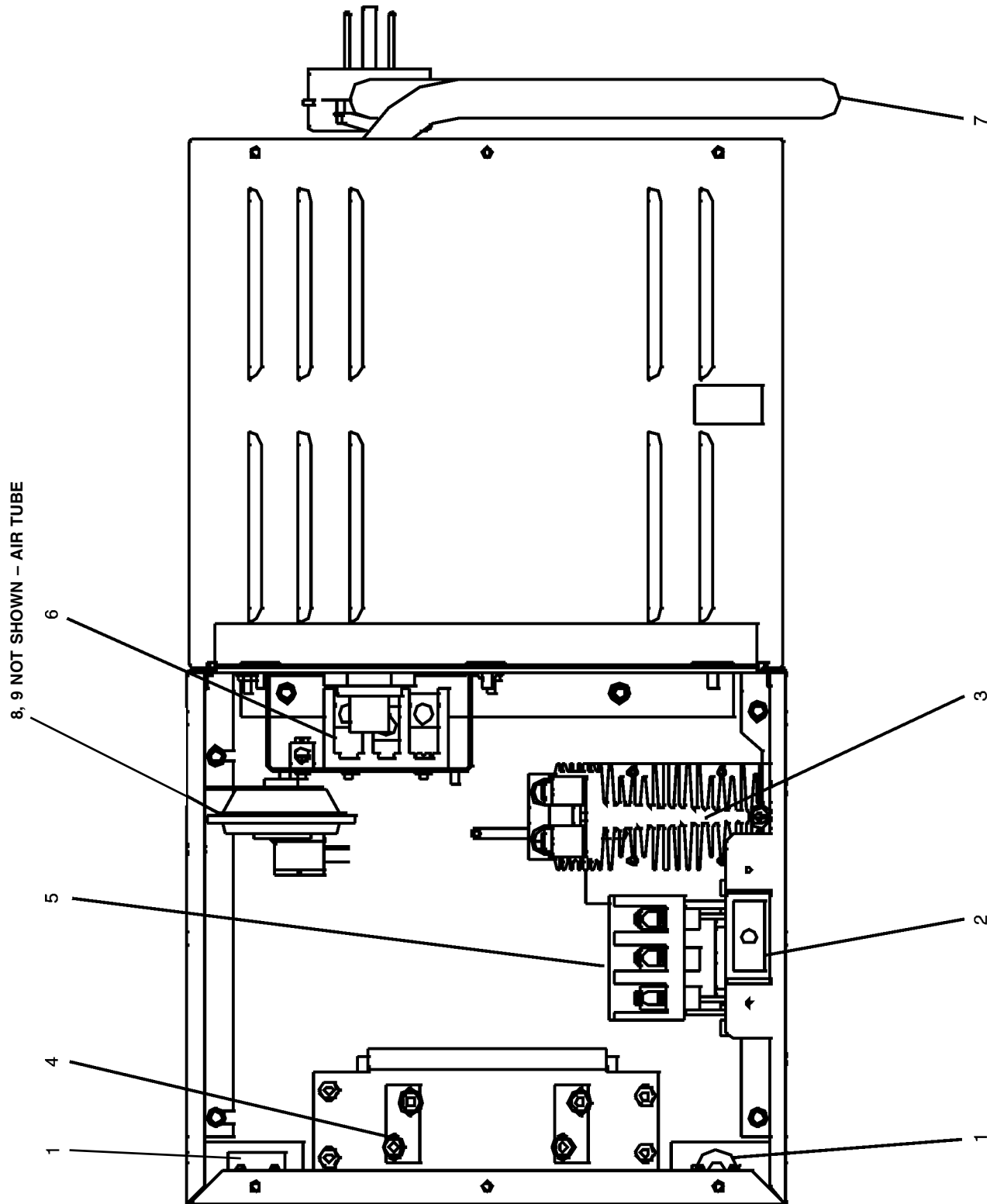


Serial Tag Location

Parts for Front View of Oven

ITEM	QTY	PARTNO.	DESCRIPTION
1	1	48382	UPPER LH END PLUG ASSEMBLY, INCLUDES PART # 48378, ITEM 5
2	1	48387	LOWER LH END PLUG ASSEMBLY
3	1	48408	LOWER RH END PLUG ASSEMBLY
4	1	48412	UPPER RH END PLUG ASSEMBLY, INCLUDES PART # 48410, ITEM 6
5	1	48378	EYEBROW, UPPER LH END PLUG ASSEMBLY
6	1	48410	EYEBROW, UPPER RH END PLUG ASSEMBLY
7	4	51398	END PLUG MOUNTING BRACKET ASSEMBLY .875
8	8	21296-0005	SCREW, HEX HEAD, WSHHD 12-14X3/4 SS BSD
9	6	36452	NUT, WING-PLASTIC 1/4-20
10	4	3101908	LEG, 4" ADJ FT (NPS)
11	1	48395	BOTTOMTRAY ASSEMBLY
12	1	48396	COVER, TOP
13	4	51387	SCR, MS, SLT TRHD 8-32X1/2 18-8
14	1	M10434	CORDSET, 50 AMP 250V 2P 3W
15	1	57399	NAMEPLATE, BLODGETT SM
16	1	52256	COVER, CHAIN

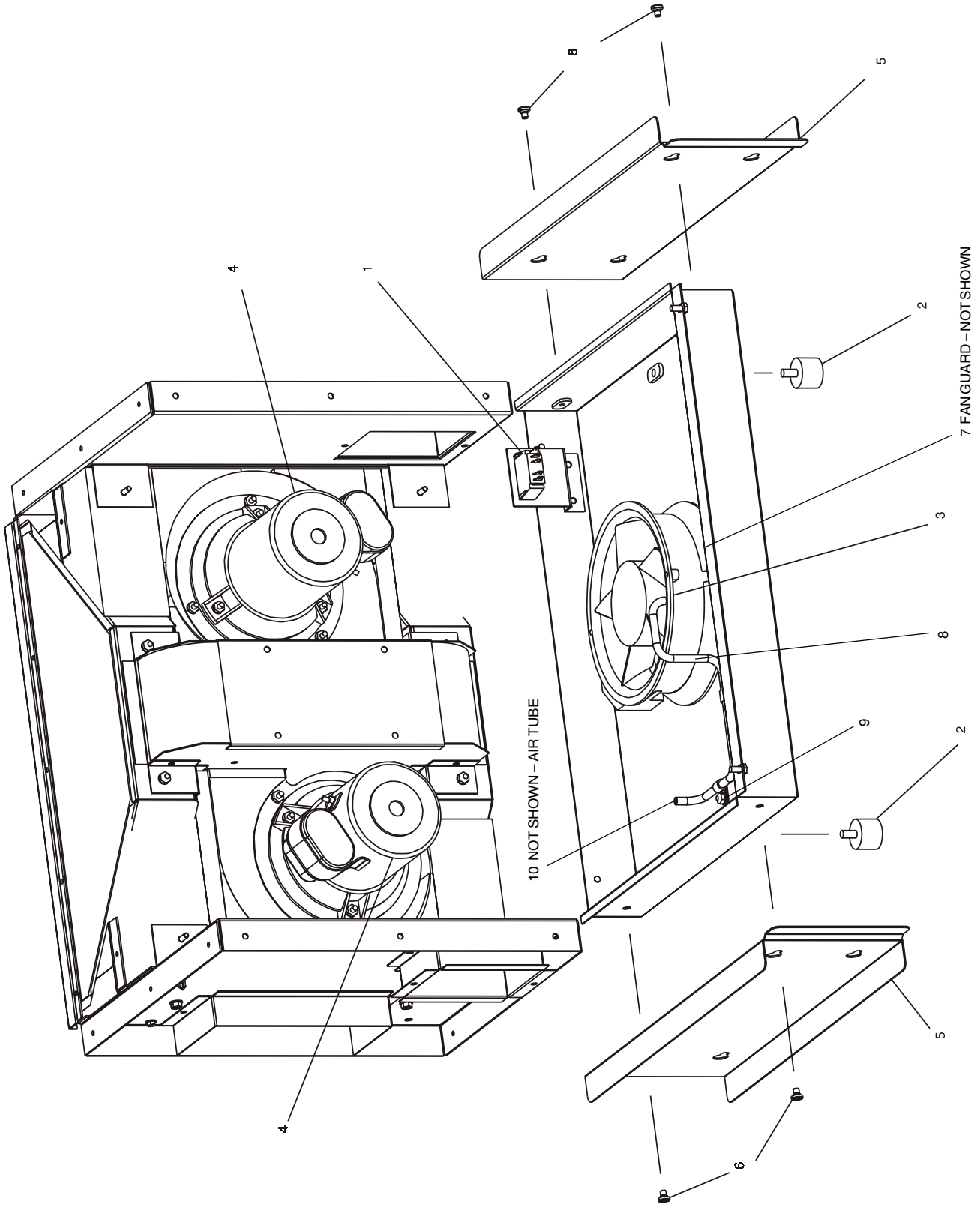
Right-hand View of Electrical Compartment



Parts for Right-hand View of Electrical Compartment

ITEM	QTY	PARTNO.	DESCRIPTION
1	1 or 2	33812-5	THERMOCOUPLE, TYPE "J", SHIELDED 2.50X120"
2	1	28021-0047	SWITCH, INTERLOCK, 10A, NO2P
3	1	51402	RELAY, HEATSINK 480VAC 100A
4	1	51961	ELEMENT, HEATING, 480V
4	1	51958	ELEMENT, HEATING 380V
4	1	51017	ELEMENT, HEATING 240V
4	1	50715	ELEMENT, HEATING, 208V
5	1	57408	CONTACTOR, 208/240V, 65A, 50/60 Hz
6	1	300-3946	BLOCK, POWER DIST 3POLES
7	1	M10434	CORDSET, 50 AMP, 250V, 2P 3W
8	1	50610	SWITCH, AIR 0.16 IN. WC
9	3 FT.	22450-0297	TUBING, SILICONE RUBBER, 27" SOLD BY THE FOOT

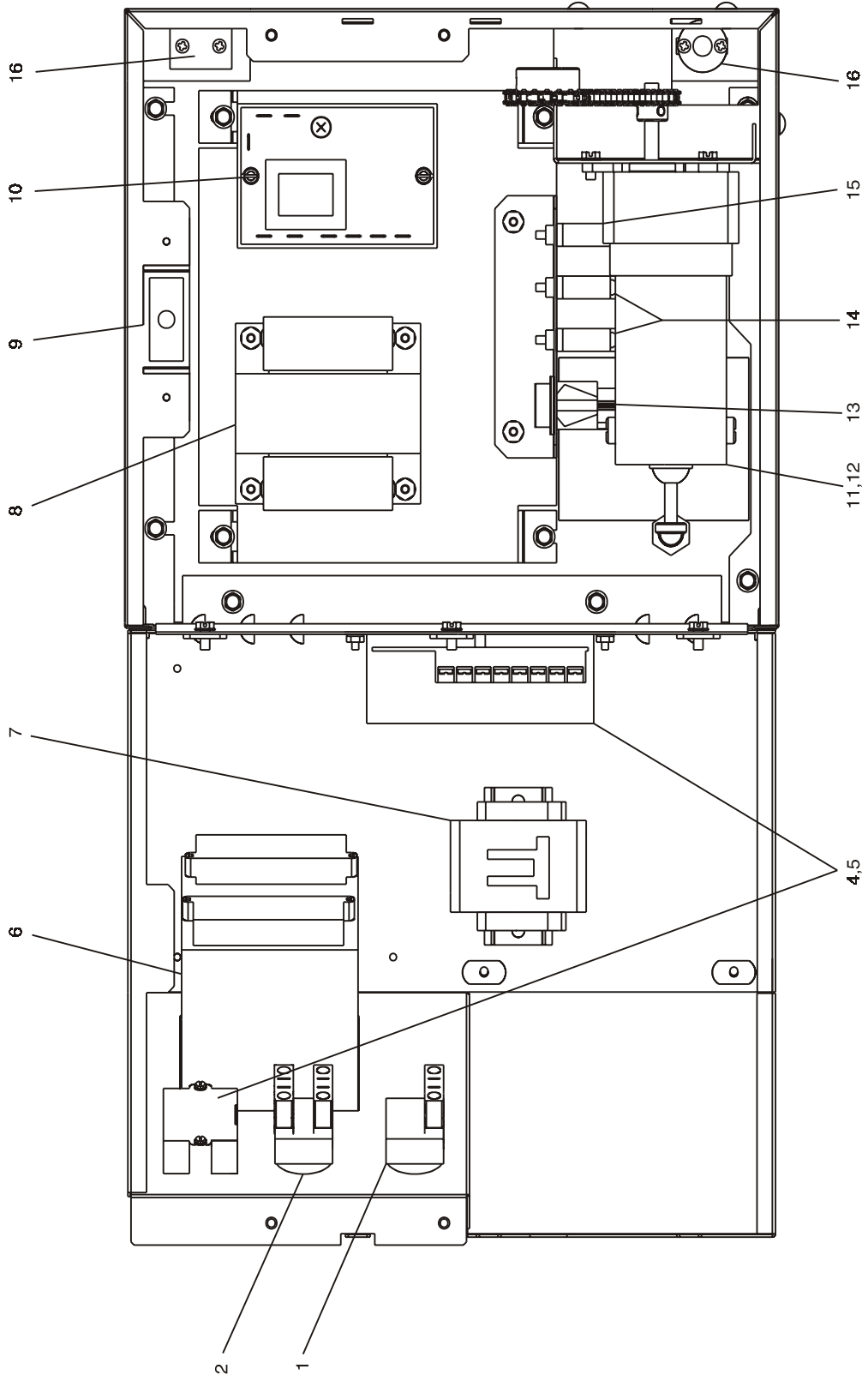
Rear-view of Blower Compartment – As viewed from Rear – Blower Motor Spins CCW



Parts for Rear-view of Blower Compartment

ITEM	QTY	PARTNO.	DESCRIPTION
1	1	28021-0061	SWITCH, MOMENTARY-10A, NO2 POLE
2	2	30927	BUMPER, WINDOW
3	1	51399	FAN, COOLING, 230V AC, 295 CFM
4	2	52244	MOTOR, BLOWER, CW, 208/230 50/60HZ
5	2	57258	PLATE, AIR VENT
6	4	7007413	SCR, SHOULDER 10-32X, 34 18-8
7	1	31497	GUARD, COOLING FAN
8	1	57474	1/4" ALUMINUM TUBE, AIR SWITCH
9	3	57476	CLAMP, AIR TUBE
10	3 FT.	22450-0297	TUBING, SILICONE RUBBER, 27" SOLD BY THE FOOT

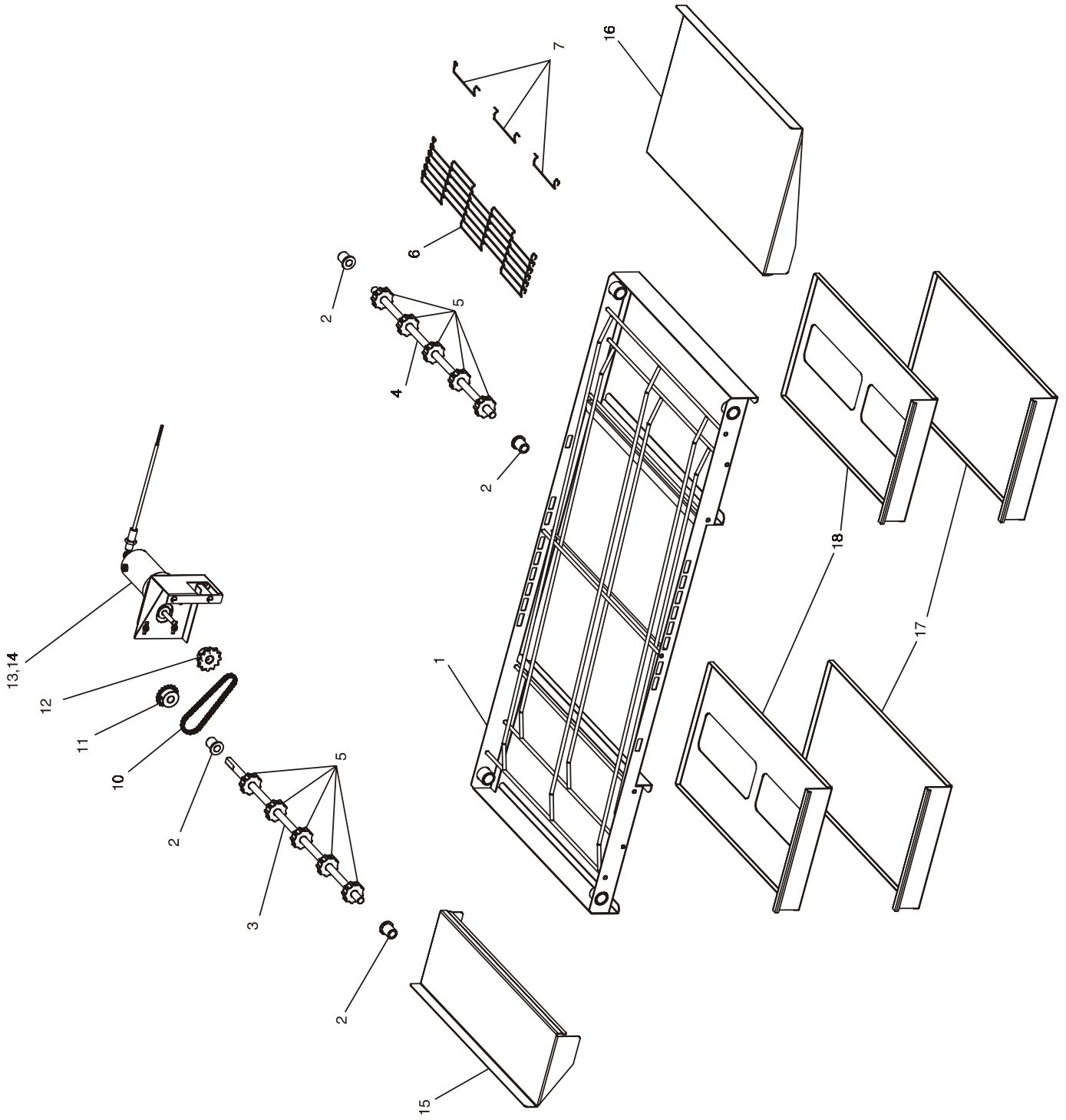
View of Left-hand Electrical Compartment



Parts for Left-hand Electrical Compartment

ITEM	QTY	PART NO.	DESCRIPTION
1	1	46521	KIT-SWITCH (CONVEYOR) CONTAINS (1) 44697 & (1) 44696)
2	1	46522	KIT-SWITCH (BLOWER/HEAT) CONTAINS (2) 44697 & (1) 44696)
3	2	44696	SELECTOR SWITCH
4	1	37337	CONVEYOR SPEED CONTROL W/DIGITAL SPEED DISPLAY
5	1	37503	DIGITAL SPEED CONTROL (DISPLAY ONLY)
6	1	47321	CONTROL, COMBO 4-20MA BURST
7	1	28041-0011	CONTACTOR, 208/240V
8	1	31504	TRANSFORMER, 230V(P)/120V(S), 200VA
9	1	28021-0047	SWITCH, INTLCK, 10A, NO2P
10	1	33983	CONTROL, ELECTRIC, HI-LIMIT, 240V
11	1	58390	MOTOR, CONVEYOR DRIVE
11a	1	39002	MAGNET 2-POLE
11b	1	310-0017	ADHESIVE
11c	1	300-2757	CONVEYOR DRIVE MOTOR-ONLY
11d	1	58484	KIT, 2 BRUSHES & 2 CAPS
11e	2	30153	BRUSH, SOLD INDIVIDUALLY, QTY 2 REQUIRED
12	1	38185	KIT, CONVEYOR PICK-UP
13	1	35145	SWITCH, PUSHBUTTON, MOLVENO, 250V
14	2	45036	BREAKER, CIRCUIT 240V, 3A
15	1	48635	BREAKER, CIRCUIT 240V, 0.3A
16	1 or 2	33812-5	THERMOCOUPLE, TYPE "J", SHIELDED, 2.50X120"

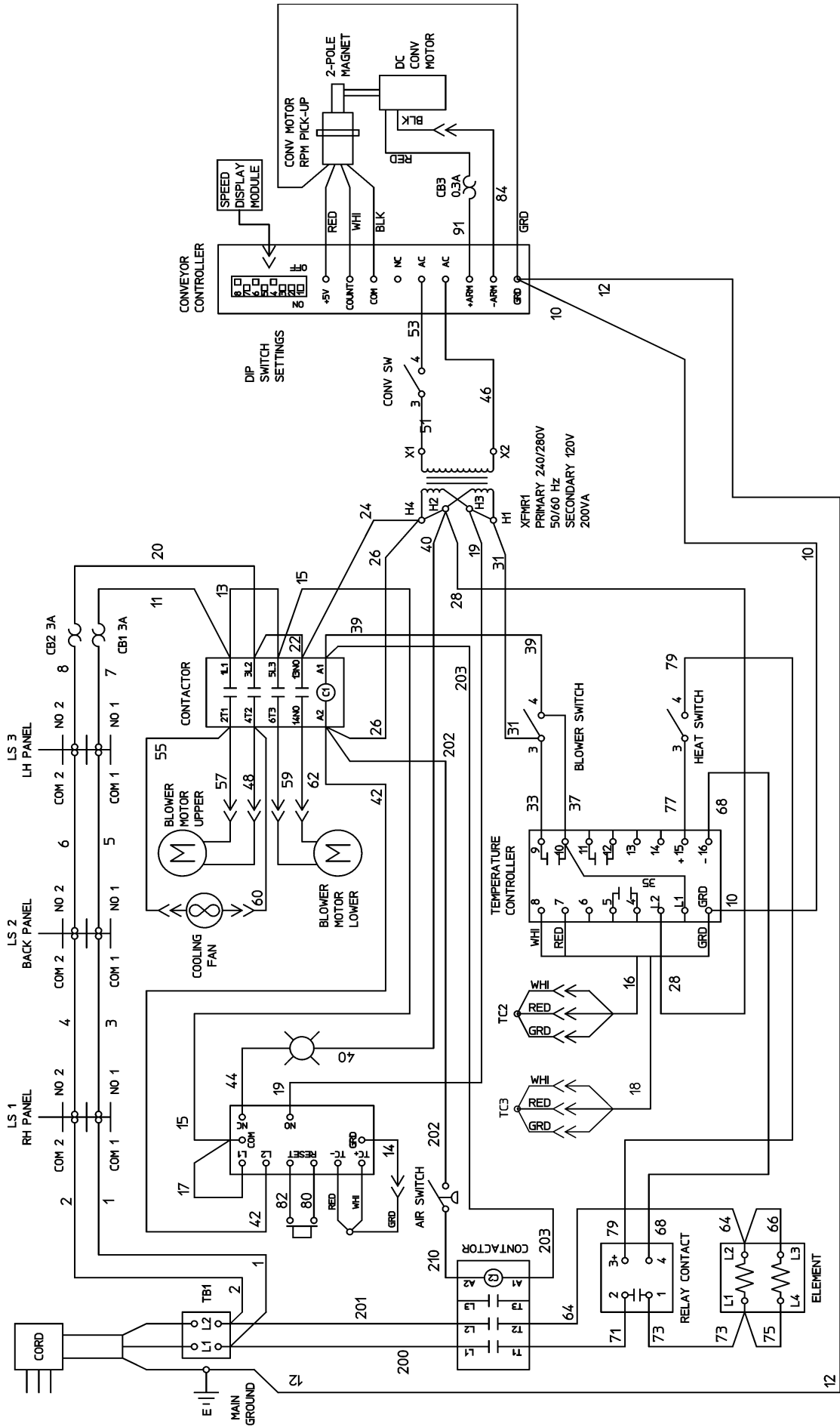
View of Conveyor Parts



Parts for Conveyor

ITEM	QTY	PARTNO.	DESCRIPTION
1	1	48471	WELDMENT
2	4	M4817	BEARING, RULON
3	1	M4815	SHAFT, DRIVE
4	1	51408	SHAFT, IDLER
5	10	M4818	SPROCKET, WIRE BELT
6	1	M7471	BELT, WIRE, STN STL
7	1	58391	LINK, MASTER LEFT 1/2P-18", KIT, MASTER LEFT, CENTER, RIGHT
10	1	55567	ASSY, CHAIN HIGH SPEED, w/MASTERLINK
10a	1	310-1212	MASTERLINK, CHAIN
11	1	55217	SPROCKET, CHAIN #25-20T-1/2
12	1	45349	SPROCKET, 25B25 w/ 5 / 16 BORE
13	1	58390	MOTOR, CONVEYOR DRIVE KIT
13a	1	39002	MAGNET 2-POLE
13b	1	310-0017	ADHESIVE
13c	1	300-2757	CONVEYOR DRIVE MOTOR ONLY
13d	1	58484	KIT, 2 BRUSHES & 2 CAPS
13e	2	30153	BRUSH, SOLD INDIVIDUALLY, QTY 2 REQUIRED
14	1	38185	SENSOR, CONVEYOR PICK-UP
15	1	51297	EXTENSION, CONVEYOR, 6"
16	1	51296	EXTENSION, CONVEYOR, 12"
17	2	48469	PAN, CRUMB
18	2	51409	PAN, CRUMB VENTED, SUPPLIED AS STANDARD

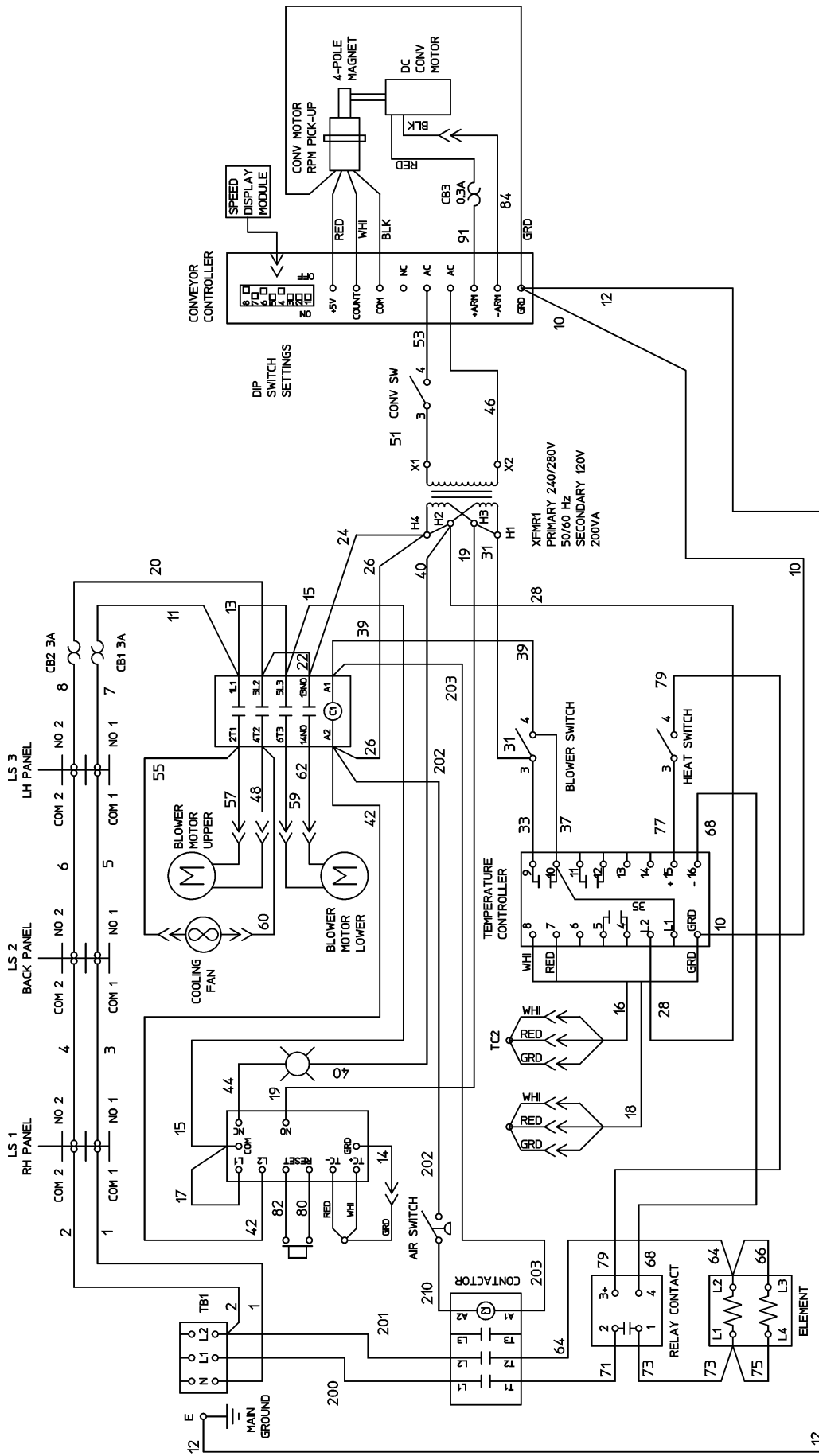
NOTES



VOLTAGE	KW	PHASE	AMPS
208	8.3	1	39.9
230-240	7.6 - 8.3	1	33.0 - 34.6

Wiring Diagram, E208-240V 50/60/1, S1820

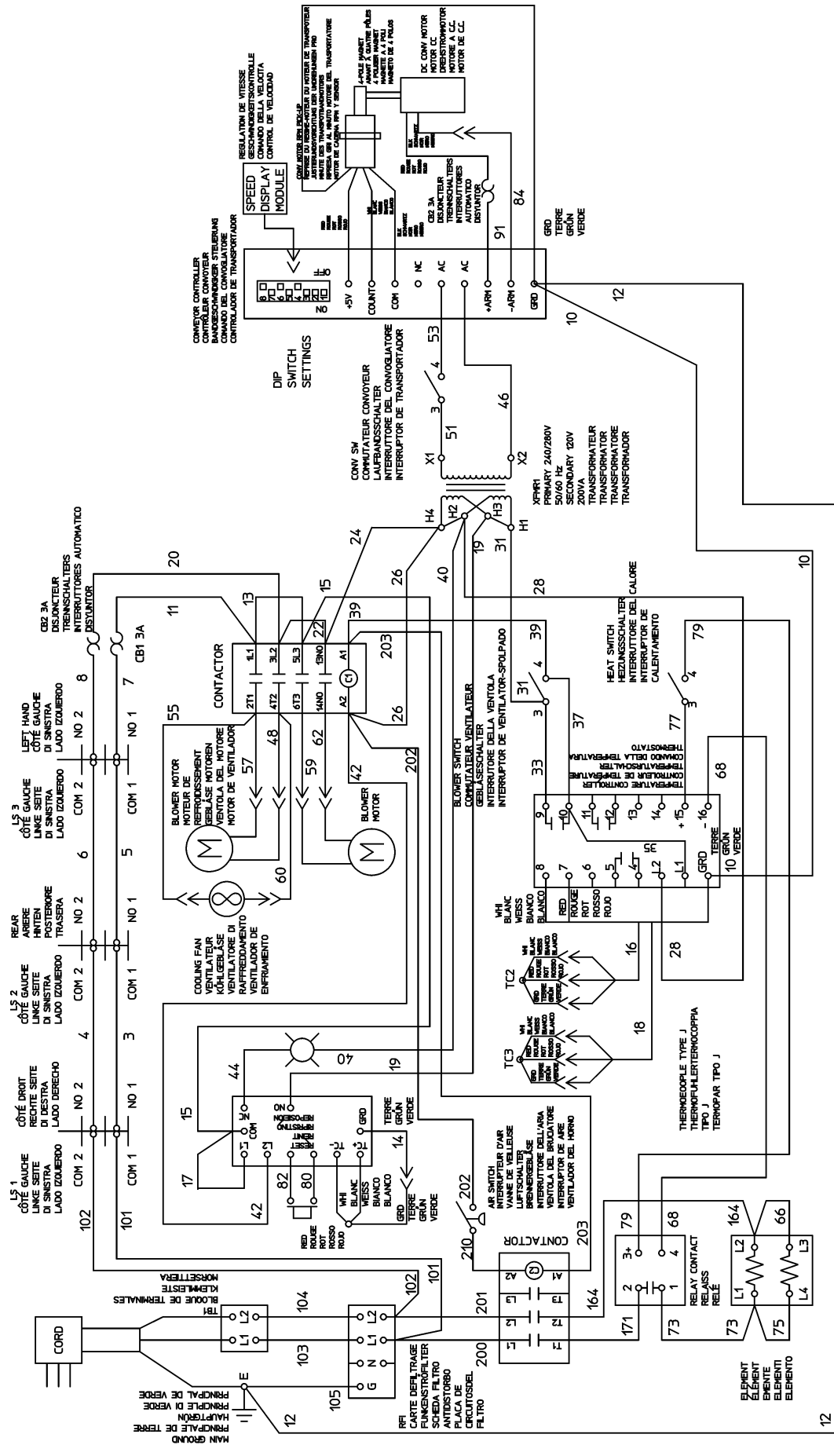
48713 Rev. H



VOLTAGE	KW	PHASE	AMPS
380	8.3	1	21.8
480	8.3	1	17.3

Wiring Diagram, E380-480V 50/60/1, S1820

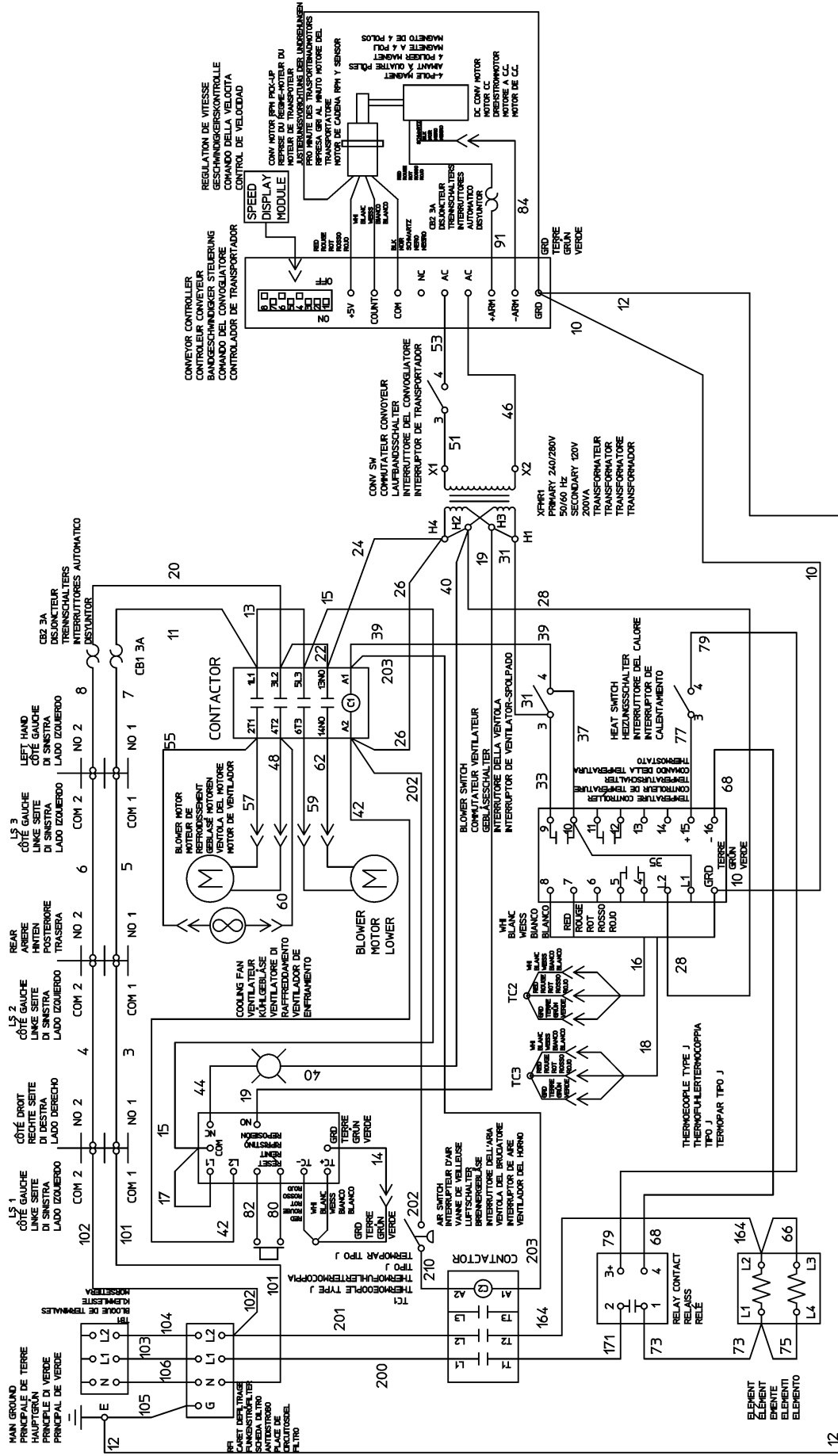
52445 Rev. H



VOLTAGE	KW	PHASE	AMPS
230-240	7.6 - 8.3	1	33.0 - 34.6

Wiring Diagram, E230-240V CE S1820

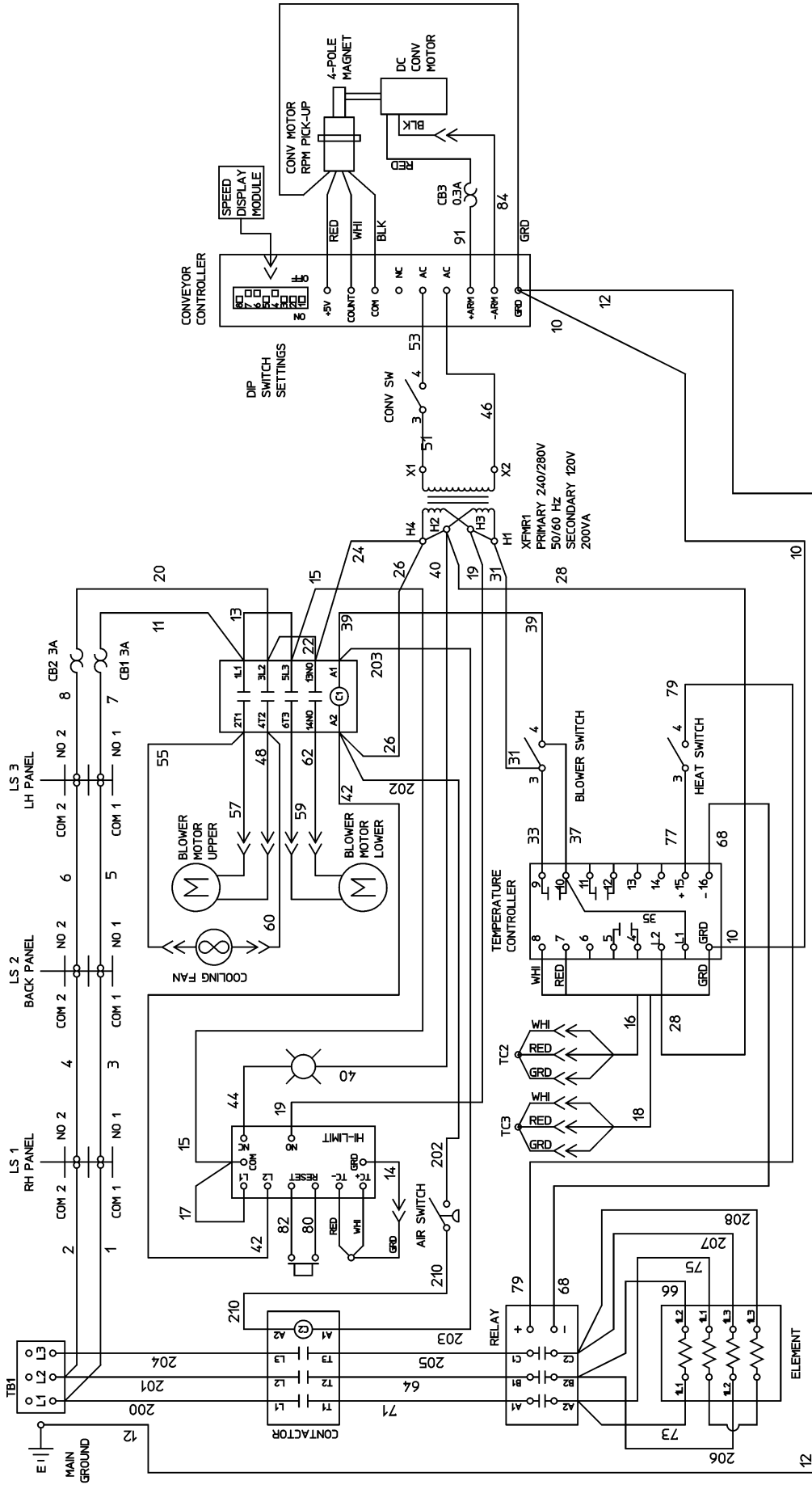
52446 Rev. H



VOLTAGE	KW	PHASE	AMPS
380-400	8.3 - 9.2	1	21.8 - 23.0

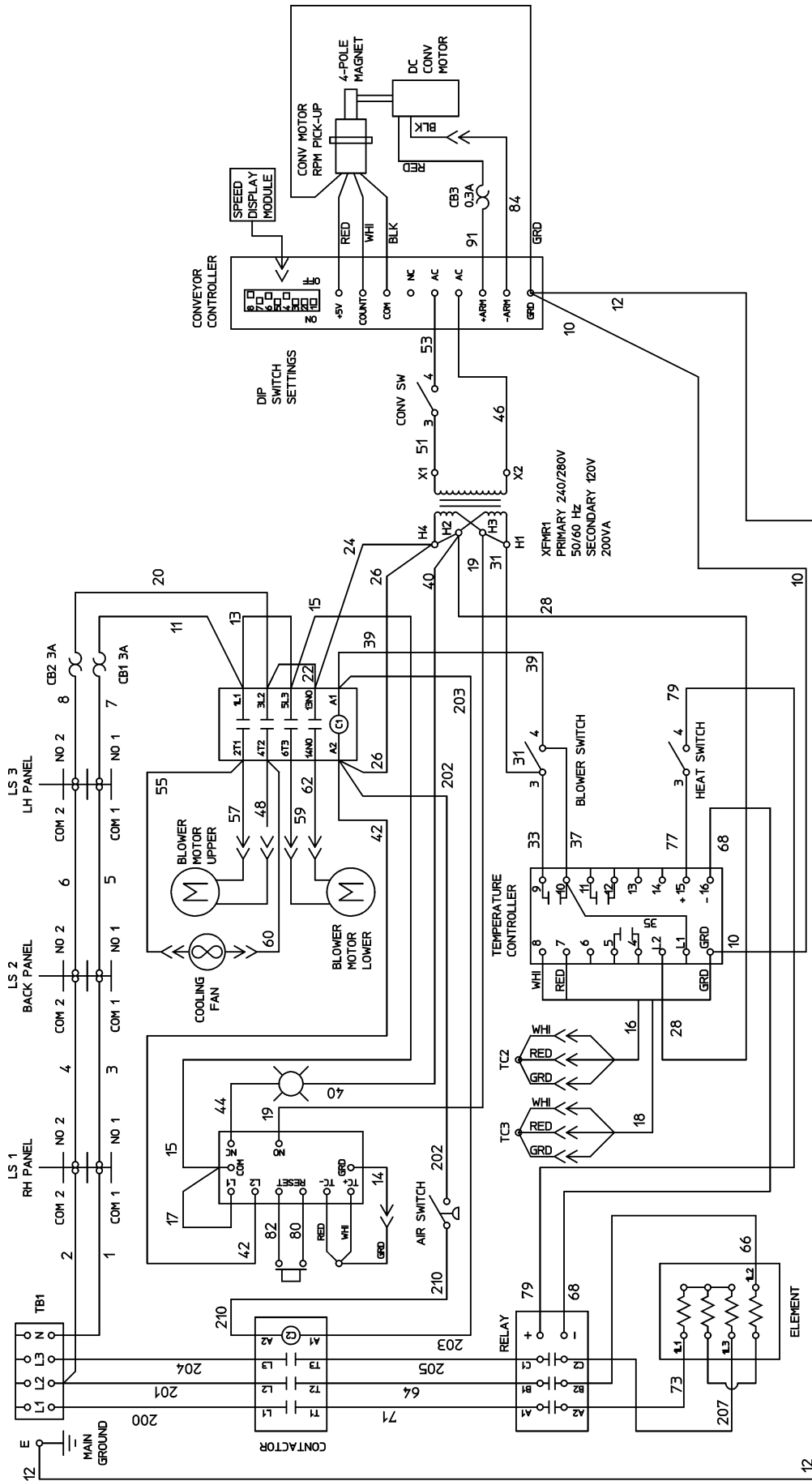
Wiring Diagram, E380-400V CE S1820

54661 Rev. H



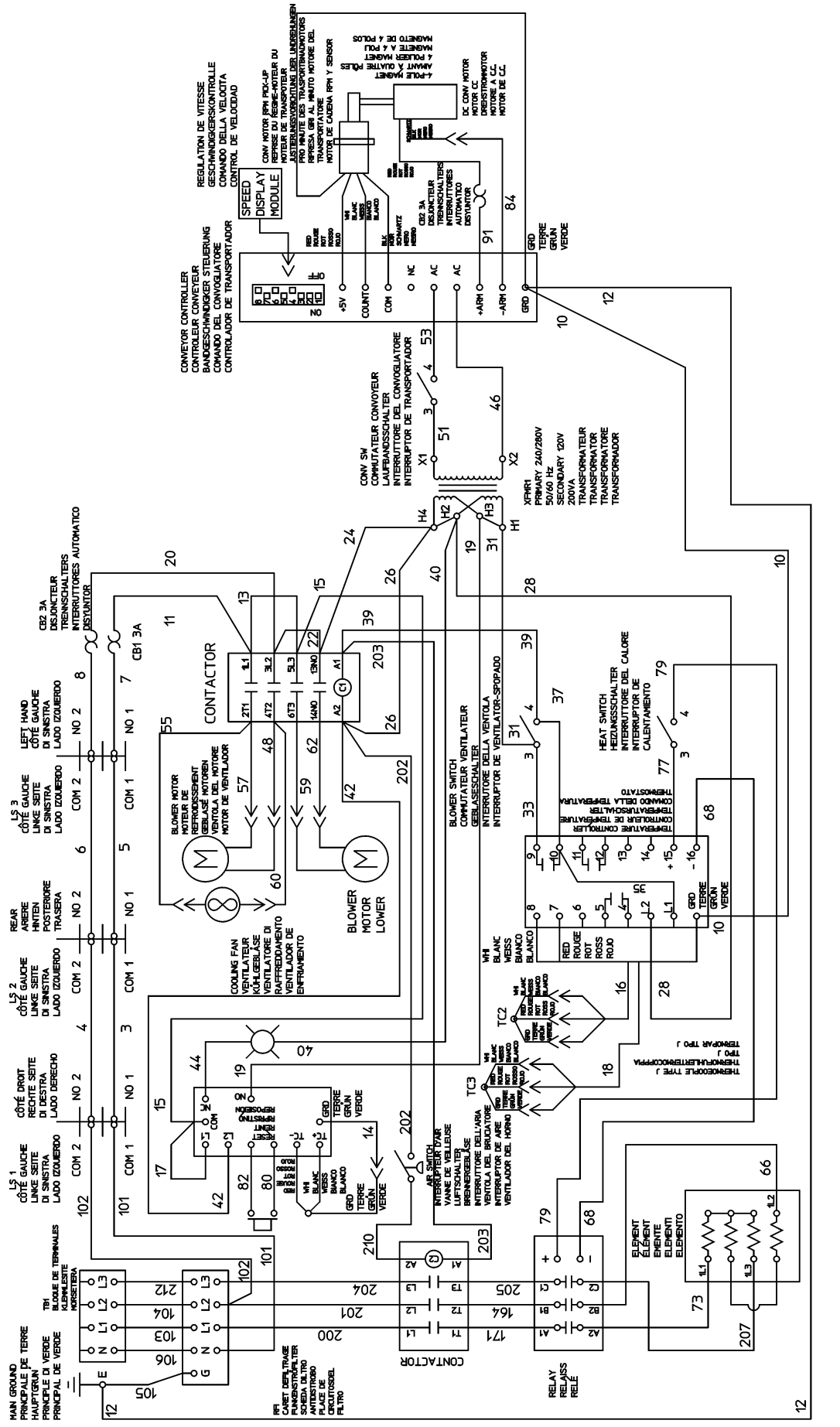
VOLTAGE	KW	PHASE	3 PHASE LOADING KW PER PHASE			NOM. AMP PER LINE W/RE 3 PHASE		
			L1-L2	L2-L3	L1-L3	L1	L2	L3
208	11.5	3	3.8	3.8	3.8	32.9	32.9	31.9
240	11.5	3	3.8	3.8	3.8	28.7	28.7	27.7

Wiring Diagram, 208/240 volt three phase domestic USA 3 thermocouples

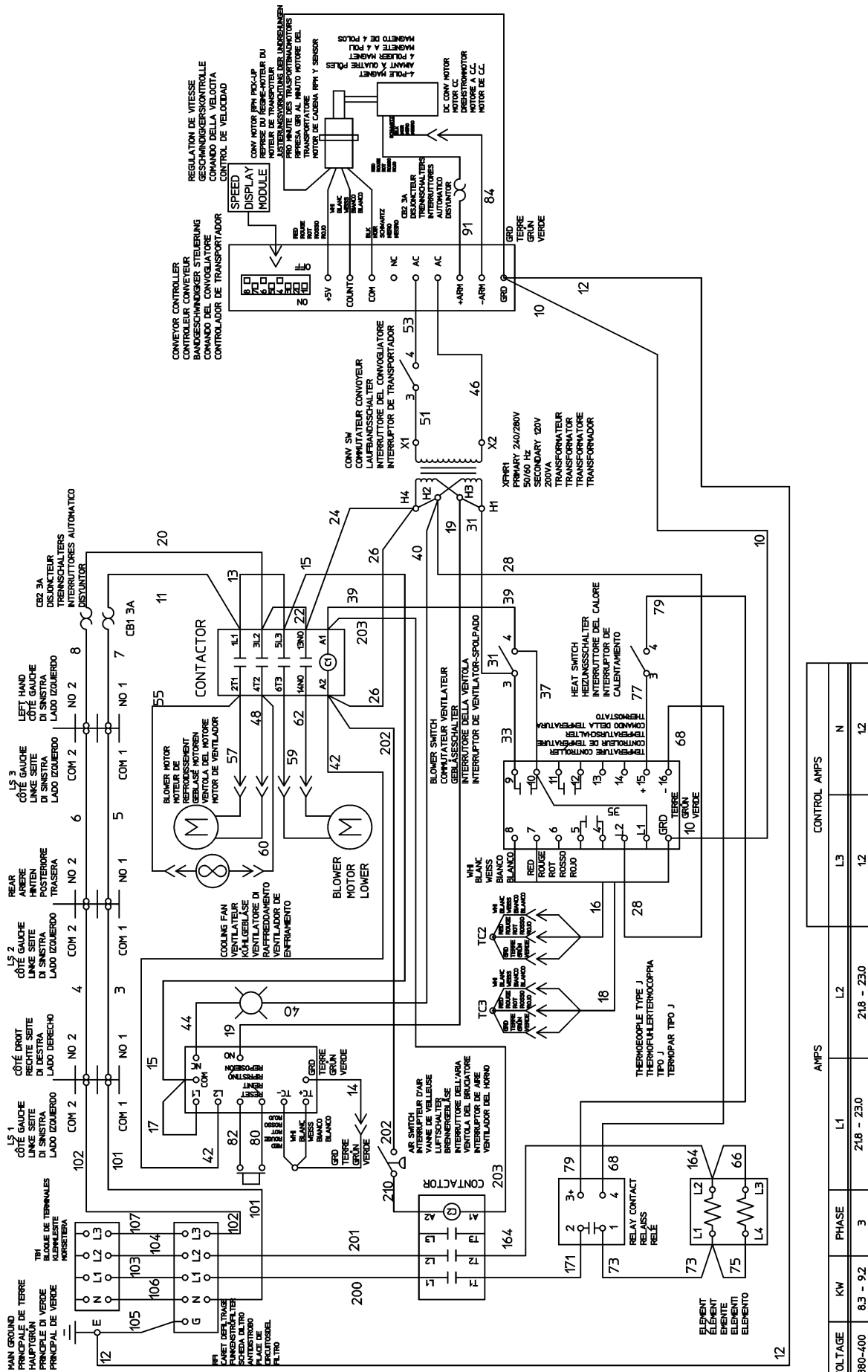


VOLTAGE	KW	PHASE	3 PHASE LOADING KW PER PHASE			NOM. AMP PER LINE WIRE 3 PHASE			
			L1-L2	L2-L3	L1-L3	L1	L2	L3	N
380	11.5	3	3.8	3.8	3.8	18.5	18.5	17.5	1
480	11.5	3	3.8	3.8	3.8	14.8	14.8	13.8	1

Wiring Diagram, 380/480 volt three phase domestic USA 3 thermocouples



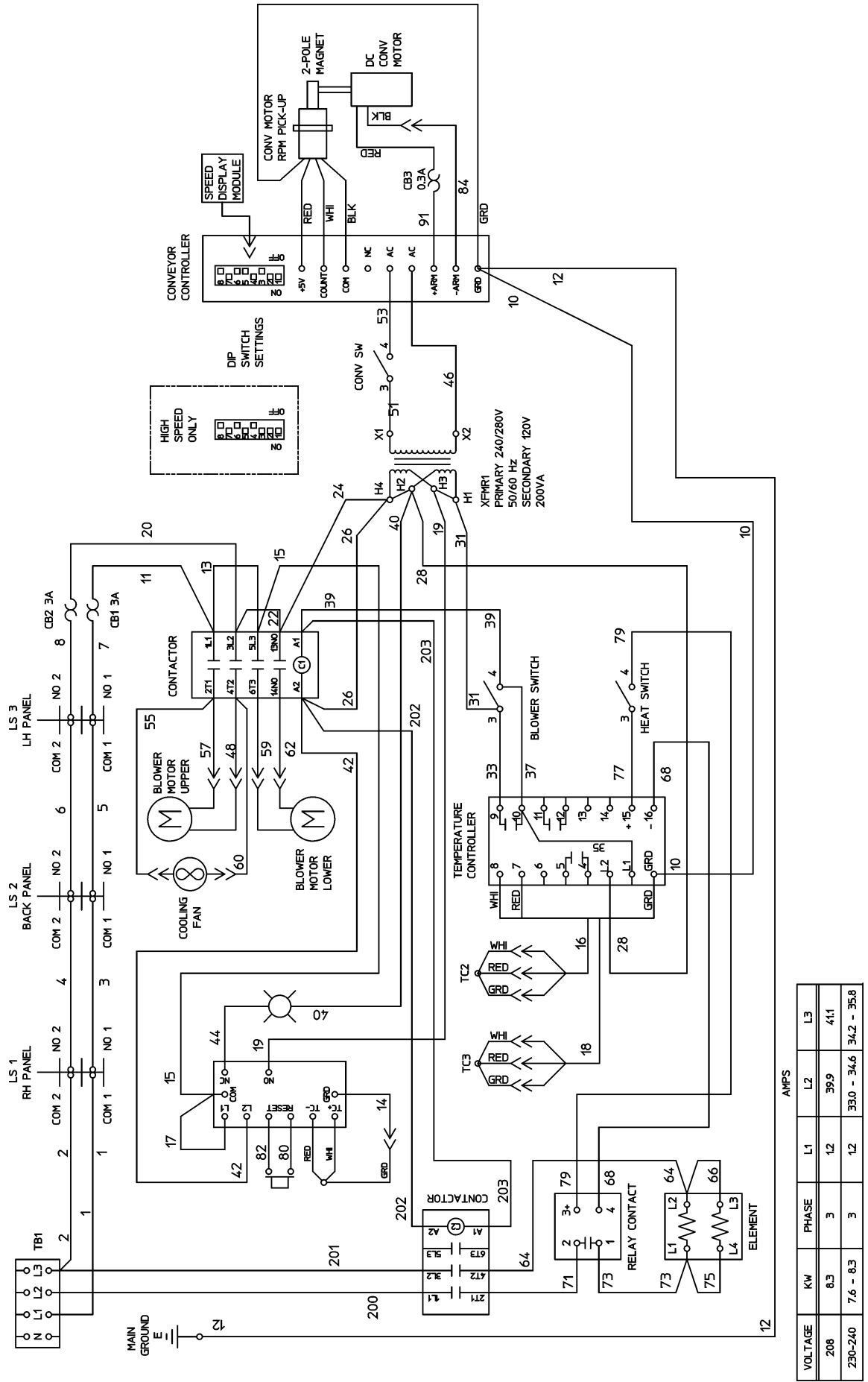
Wiring Diagram, 380/400 volt three phase CE 3 thermocouples



VOLTAGE	KW	PHASE	AMPS		
			L1	L2	L3
380-400	8.3 - 9.2	3	218 - 23.0	218 - 23.0	12
					CONTROL AMPS
					N
					12

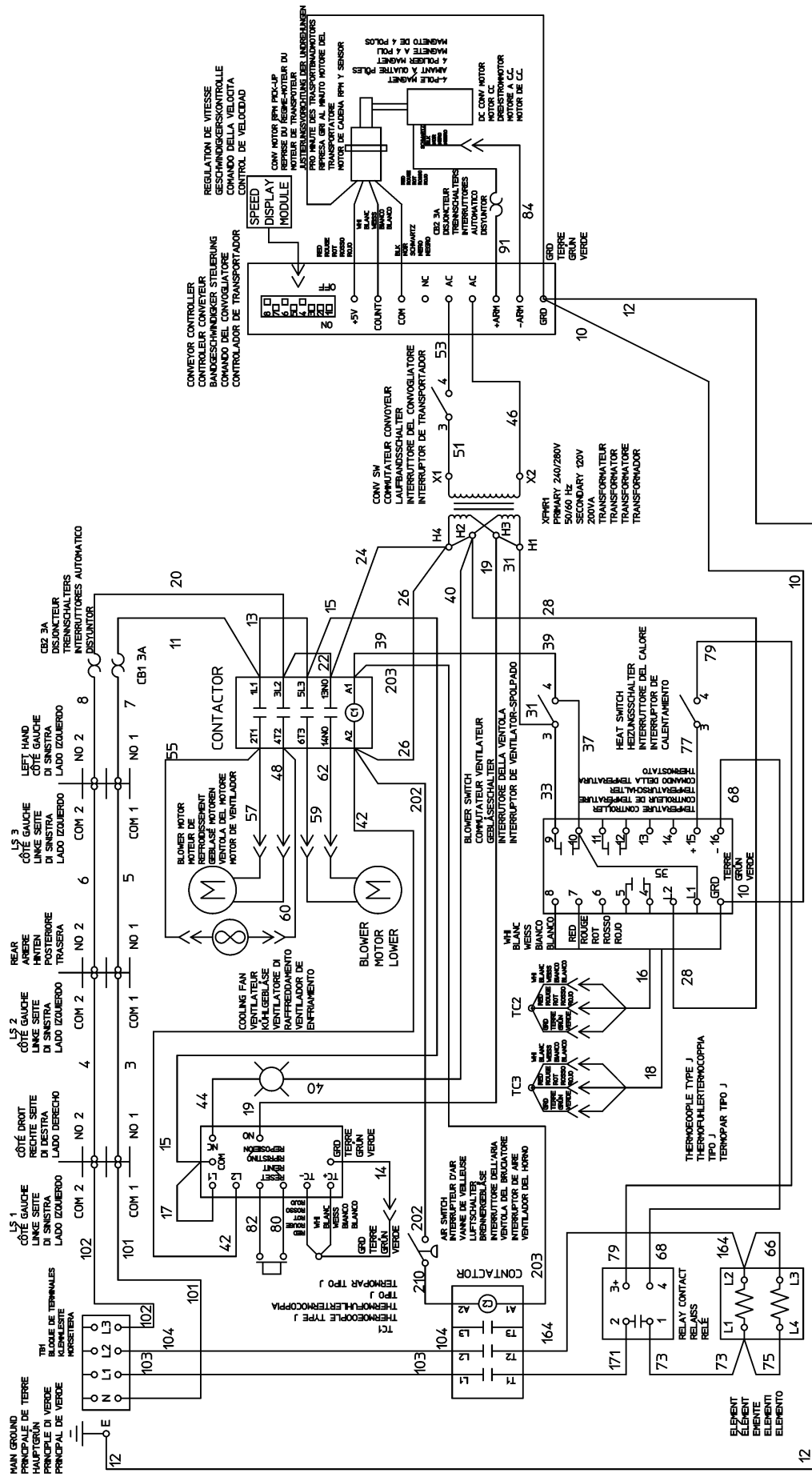
Wiring Diagram, 380/400 volt three phase CE HighLeg 3 thermocouples

58158 Rev. D



VOLTAGE	KW	PHASE	AMPS		
			L1	L2	L3
200	8.3	3	12	39.9	41.1
230-240	7.6 - 8.3	3	12	33.0 - 34.6	34.2 - 35.8

Wiring Diagram, 208/240 volt three phase domestic USA HighLeg 3 thermocouples



VOLTAGE	KW	PHASE	AMPS		
			L1	L2	L3
380	8.3	3	21.8	21.8	12
480	8.3	3	17.3	17.3	12

Wiring Diagram, 380/480 volt three phase domestic USA HighLeg 3 thermocouples

58228 Rev. C



A = 51989 PLATE, OTR L16GN W/2 (12) 2 ROWS
 47758 PLATE, INNER
 47765 WLDMT, MANIFOLD L16 GN

B = 51990 PLATE, OTRL16GNW/2 (3) 3 (5) 3 ROWS
 47758 PLATE, INNER
 47765 WLDMT, MANIFOLD L16 GN

52249 Rev. F

Standard Air Finger Configuration (Old style September 2005 and before)



- A** = 51357 PLATE, OTR L5GN W/7 HOLES
51027 PLATE, INR L5 GN COL/ALUZ
51986 WLDMT, MANIFOLD L5GN PRTL BFL

- B** = 51356 PLATE, OTR L5GN W/2 ROWS
51027 PLATE, PLATE, INR L5 GN COL/ALUZ
51986 WLDMT, MANIFOLD L5GN PRTL BFL

- C** = 50682 PLATE, BLANK FULL

51988 Rev. D

Standard Air Finger Configuration (New style October 2005 and after)

NOTES

